

REMARKS

Telephone Interview

Applicant's representative, Marvin Beekman, telephoned Examiner Le on June 28, 2006 to discuss the restriction. Applicant requested clarification of the distinction between Species I and Species II, III and IV. Examiner Le clarified that he distinguished Species I from the other species because he indicated that claims 1 and 6 were silent as to retaining metal ions on the exposed second layer, and thus inferred Species I to include removing metal ions from the exposed first surface without retaining metal ions on the exposed second layer.

Election

In the Elections of Species Requirement mailed June 26, 2006, the Examiner has restricted the claims to one of the following patentably distinct species:

Species I, e.g. claims 1-5 and 6-9: Method for depositing metal on a semiconductor device having a substrate, an exposed first surface and an exposed second surface by applying a second voltage for removing metal ions from the exposed first surface without retaining metal ions on the exposed second layer.

Species II, e.g. claims 10-15, 16-20 and 21-24: Method for depositing metal on a semiconductor device having a substrate, an exposed first surface and an exposed second surface by applying a second voltage/second duty cycle for removing metal ions (copper) from the exposed first surface without retaining metal ions (copper) on the exposed second layer.

Species III, e.g. claims 10-15, 16-20 and 25-28: Method for depositing metal on a semiconductor device having a substrate, an exposed first surface and an exposed second surface by applying a second voltage/second duty cycle for removing metal ions (nickel) from the exposed first surface without retaining metal ions (nickel) on the exposed second layer.

Species IV, e.g. claims 10-15, 16-20 and 29-32: Method for depositing metal on a semiconductor device having a substrate, an exposed first surface and an exposed second surface

by applying a second voltage/second duty cycle for removing metal ions (palladium) from the exposed first surface without retaining metal ions (palladium) on the exposed second layer.

Applicant provisionally elects, with traverse, Species II identified by the Examiner as claims 10-15, 16-20 and 21-24.

As identified by the Examiner, Claims 10-20 are generic to Species II, III, and IV. Thus, upon allowance of any of claims 10-20, Applicant respectfully requests consideration of Species III and IV.

Applicant traverses the assertion that Species I (claims 1-9) includes removing metal ions from the exposed first surface without retaining metal ions on the exposed second layer. Claims 1-9 do not recite that metal ions are not retained on the exposed second layer. Species I, as identified by the Examiner, does not exist in the pending claims. Applicant respectfully asserts that, in identifying Species I, the Examiner improperly read limitations into claims 1-9. Additionally, claim 1 recites a method for depositing a metal, and claim 6 recites a method for depositing copper. Applicant respectfully asserts that at least independent claims 1 and 6 are generic to the identified Species II, III, and IV.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6960 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By their Representatives,

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Date 7-18-06 By 
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 18 day of July 2006.

Name KATE GANNON


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